

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2003/002436

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 H01Q 1/24

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC:H01Q1/24, H01Q1/27, H01Q9/30,H01Q13/10,

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Patents and Applications for Inventions since 1975

Korean Utility Models and Applications for Utility Models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	KR 2002-22490 A (SAMSUNG Electronics Co) 27 Mar 2002 see the detailed description page 3 line58- page4 line59, Fig5-11	1,2 3-5
Y	JP 11- 136020 A (MATSUSHITA Electric IND Co. Ltd) 21 May 1999 see the detailed description page7 unit(0051)- page8 unit(0068) Fig8-14	1-5
A	KR 2002-58615 A (ACE TECHNOLOGY Co) 13 Apr 2002 see the detailed description page 4 line41- page5 line17, Fig8a-9	1-3
A	JP 2000-223931 A (SONY Co) 11 Aug 2000 see the detailed description page3 unit(0010)- page4 unit(0019) Fig1-4	1-2
A	US 6466176 B1 (In4tel Ltd) 15 Oct 2002 see column14 line 7- column14 line 29 Fig9	1-2

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

24 FEBRUARY 2004 (24.02.2004)

Date of mailing of the international search report

24 FEBRUARY 2004 (24.02.2004)

Name and mailing address of the ISA/KR



Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

BAK, Jeong Sik

Telephone No. 82-42-481-5713



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/KR2003/002436

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 2002-22490 A	27 Mar 2002	None	
JP 11- 136020 A	21 May 1999	CN 1230800 A EP 933832 A2	06 Oct 1999 04 Aug 1999
KR 2002-58615 A	13 Apr 2002	None	
JP 2000-223931 A	11 Aug 2000	None	
US 6466176 B1	15 Oct 2002	AU 200169413 A5 CA 2416437 AA EP 1307947 A1 TW 522608 B WO 200205384 A1	21 Jan 2001 17 Jan 2001 07 May 2003 01 Mar 2003 17 Jan 2002